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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/801,005	03/16/2004	Noboru Kawai	4255-6	1584
23117	7590	09/22/2005	EXAMINER	
NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203			ELLIS, SUEZU Y	
			ART UNIT	PAPER NUMBER
			2878	
DATE MAILED: 09/22/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/801,005	KAWAI, NOBORU	
	Examiner	Art Unit	
	Suezu Ellis	2878	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on March 16, 2004 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the air inlets and the dust sensor in air conditioning equipment (claims 5-8) must be shown or the features canceled from the claims. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate

changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The disclosure is objected to because of the following informalities: Paragraph [0041] is confusing. It is unclear from the disclosure how the dust will be carried from the passage hole 14a and out through the opening 13a if the passage hole faces toward the outside of the air conditioning equipment. How does a passage hole and an opening have directions? From the description of the passage hole facing toward the outside of the air conditioning equipment, it seems as though the passage hole is like an air outlet. However, the specification further describes the air flowing into the passage and flowing out of the opening which is confusing.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the

art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 3, 5, and 7 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The area in the specification wherein the applicant discloses at least one of the covers may be disposed so as to be removed by at least one distance from at least one light emitting unit, through dust in at least one of the dust passage routes, to at least one of the light receiving units is noted [0013]. However, other than the reiteration of the claim language in the specification, the specification does not seem to support the claim.

Claim 7 is non-enabling due to its dependency from a non-enabling claim.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 3, 5 and 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 3 is confusing. It is unclear by what applicant means by the cover is disposed so as to be removed by at least one distance from an optical path from at least one of the light emitting units, through dust in at least one of the dust passage routes to at least one light receiving unit. Is applicant saying the cover is disposed within the

dust? Further it is unclear as to what applicant means by the cover being removed by at least one distance from the optical path of at least one of the light emitting units. This claim is confusing. Please clarify and/or reword. Further, the specification fails to sufficiently support this claim. Since the scope of the claim is unclear, the claim will not be further treated on the merits.

With respect to claim 5, it is unclear as to how a passage hole can be directed toward the outside of the air conditioning equipment and an opening is directed toward the inside of the air conditioning equipment. How can holes and openings be directed? Is the "directed toward" part with respect to air flow (i.e. air flows toward the inside of the air conditioning equipment via the opening?) If the direction of the hole and opening are with respect to air flow, this too is confusing. Passage hole as defined in claim 1 is for "permitting introduction of dust from the exterior to at least one of the dust passage routes". If air flow is flowing out of the passage hole in claim 4, how can dust be introduced into it from the exterior? For examining purposes, the passage hole and the opening will be defined as bordering the outside/inside of the equipment. Please clarify.

Claim 7 is indefinite due to its dependency from an indefinite claim (claim 3) and will not be further treated on the merits.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 2878

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Yang (US 5,319,827).

With respect to claim 1, Yang discloses in Figs. 1 and 2, a dust sensor for a vacuum cleaner comprising a light emitting unit (210) and a light receiving unit (220) which detects the presence/absence of dust, a passage hole (suction path - 200) and an opening (handle - 120) for discharging the dust from the passage route wherein the opening is larger than the passage hole. Yang further discloses a main body housing that partially encloses the dust sensor (extension tube - 130).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art by the applicant in view of Best et al. (US 4,906,978). Hereinafter, Best et al. will be referred to as Best.

With respect to claims 1 and 2, applicant discloses in the admitted prior art (Fig. 6) all the limitations with exception of "one or more openings provided at least one of the main body housing or housings, for permitting discharge of dust from at least one of the

dust passage route or routes to the exterior” and “at least one of the opening or openings is larger than at least one of the passage hole or holes”. Applicant and Best are directed to a similar problem solving field of detecting dust and/or smoke. Best teaches it is well known in the art for a smoke detector which also detects dust to comprise a cover which can be removed for cleaning the internal components of the sensor (col. 3, lines 20-23). Note, the opening would be the area the cover encompasses. It would have been an obvious design choice to include an opening with a removable cover in order to have an easy access into the sensor for cleaning purposes, as taught by Best. Note, this modification would result in the opening being larger than the passage hole.

Claims 1, 2, 4, 5, 6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sekoguchi et al. (US 2004/0130271). Hereinafter, Sekoguchi et al. will be referred to as Sekoguchi.

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention “by another”; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR

1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(l)(1) and § 706.02(l)(2).

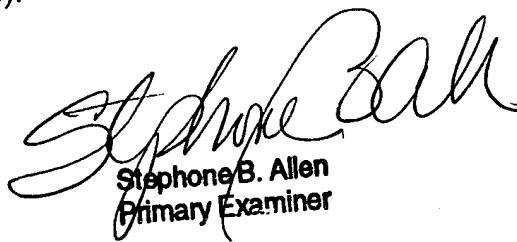
With respect to claim 1, Sekoguchi discloses in a dust sensor in an air conditioning apparatus comprising a light emitting unit and a light receiving unit [0094]. Segoguchi further discloses the dust sensor is placed in the main body where air in the room passes through it, thus it inherently has a passage route (air flow route) and a passage hole for permitting the introduction of dust. The passage hole can be considered the air inlet into which the air is sucked through in order to pass through the dust collecting filter [0097]. Sekoguchi further discloses a microcomputer detects/measures the air pollution condition in the room with the dust sensor [121]. For the discharge of the dust, the dust filter is replaced. Sekoguchi fails to expressly disclose how the dust filter is removed, however it is common knowledge that the cover of the air conditioning unit is removed in order to gain access to the dust filter for replacement. Thus, the opening can be deemed as the entire area the cover encompasses, which is larger than the air inlet (passage hole). Further, both the passage hole and openings border the interior and exterior of the equipment, thus are directed towards the inside and outside of the air conditioning equipment.

Telephone/Fax Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Suez Ellis whose telephone number is 571-272-2868. The examiner can normally be reached on 8:30am-5pm (Monday-Friday).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Porta can be reached on 571-272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Stephone B. Allen
Primary Examiner